

## AMENDMENTS TO THE CLAIMS

In accordance with the PTO's amendment format, a detailed listing of all claims has been provided. A status identifier is provided for each claim in parentheses following each claim number.

### In the Claims:

Please amend claims 1, 6, 11, and 21.

Please cancel claim 14.

No new claims are added.

Claims 1-13, 15-25 are currently pending.

**Listing of the Claims**

1. (Currently Amended) A method for debugging a target computer that utilizes virtual memory paging, the method comprising:

transferring physical memory data from the target computer to a host computer; and

replicating virtual memory data from the physical memory data on the host computer, wherein the virtual memory data on the host computer is identical to virtual memory data on the target computer.

2. (Original) The method as recited in claim 1, further comprising debugging a fault on the target computer by analyzing replicated data on the host computer.

3. (Original) The method as recited in claim 1, further comprising caching the replicated data in memory on the host computer.

4. (Original) The method as recited in claim 1, wherein the target computer includes an operating system that uses table-driven paged memory management.

5. (Original) The method as recited in claim 1, wherein:  
the target computer includes a processor that has halted execution; and  
the virtual memory data is located in physical memory of the target computer

1  
2 6. (Currently Amended) A host computing system, comprising:  
3 a processor;  
4 memory;  
5 means for establishing a connection between the memory and memory of a  
6 target computer;  
7 a data retrieval component configured to transfer address data from memory  
8 of the target computer to the memory;  
9 an address translation component configured to replicate virtual memory  
10 addresses from the address data in the memory, wherein the virtual memory  
11 addresses in the host computing system are identical to virtual memory addresses  
12 of the target computer.  
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14 7. (Original) The host computing system as recited in claim 6,  
15 further comprising cache memory configured to store the replicated virtual  
16 memory addresses.  
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18 8. (Original) The host computing system as recited in claim 6,  
19 wherein the host-side address translation component is further configured to  
20 validate the replicated virtual memory addresses.  
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22 9. (Original) The host computing system as recited in claim 6,  
23 further comprising a memory management verifier that verifies that a processor of  
24 the target computing system has memory management enabled.  
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1           10. (Original) The host computing system as recited in claim 6,  
2 wherein the means for establishing a connection between the memory and memory  
3 of a target computer comprises hardware-assisted debug probes.

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5           11. (Currently Amended) A method, comprising:  
6 accessing address tables from physical memory of a target computer system;  
7 replicating the address tables on a host computing system; and  
8 using data contained in the address tables to derive virtual address data that  
9 was used on the target computer system, wherein the virtual address data on the  
10 host computer system are identical to virtual address data on the target computer  
11 system.

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13           12. (Original) The method as recited in claim 11, further comprising  
14 storing the address tables in memory on the host computer system.

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16           13. (Original) The method as recited in claim 11, further comprising  
17 caching the virtual address data on the host computer system.

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19           14. (Canceled)

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21           15. (Original) The method as recited in claim 11, further comprising  
22 determining if memory management of a target computer system processor is  
23 enabled.  
24  
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1           16. (Original) The method as recited in claim 11, further comprising  
2 performing the method only if memory management of a target computer system  
3 processor is enabled.

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5           17. (Original) The method as recited in claim 11, wherein the  
6 accessing further comprises:

7           locating the address tables in physical memory of the target computer  
8 system; and

9           reading the address tables from the target computer.

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11           18. (Original) The method as recited in claim 11, further comprising  
12 validating the virtual address data to ensure it is identical to the virtual address data  
13 stored on the target computer system.

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15           19. (Original) The method as recited in claim 11, further comprising  
16 debugging a fault that occurred on the target computer by analyzing the virtual  
17 address data on the host computer system.

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19           20. (Original) A computer-readable medium containing processor-  
20 executable instructions that, when executed on a processor, perform the method of  
21 claim 11.

22  
23           21. (Currently Amended) One or more computer-readable media  
24 containing computer-executable instructions that, when executed by a computer,  
25 perform the following steps:

1 transferring physical memory data ~~contained~~ of a target computer to a host  
2 computer;

3 translating address data contained in the physical memory data to virtual  
4 addresses utilized by the target computer, wherein the virtual addresses on the host  
5 computer are identical to virtual addresses on the target computer.

6  
7 22. (Original) The one or more computer-readable media as recited in  
8 claim 21, further comprising computer-executable instructions that, when executed  
9 by a computer, perform the following steps:

10 locating address data in the physical memory of the target computer; and  
11 transferring only the address data to the host computer.  
12

13 23. (Original) The one or more computer-readable media as recited in  
14 claim 21, further comprising computer-executable instructions that, when executed  
15 by a computer, caches data transferred from the target computer on the host  
16 computer.  
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18 24. (Original) The one or more computer-readable media as recited in  
19 claim 21, further comprising computer-executable instructions that, when executed  
20 by a computer, validating the transferred data to determine if the transferred data is  
21 identical to the contents of the physical memory.  
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23 25. (Original) The one or more computer-readable media as recited in  
24 claim 21, further comprising computer-executable instructions that, when executed  
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1 by a computer, determining if memory management is enabled on a processor in  
2 the target computer prior to transferring data.  
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